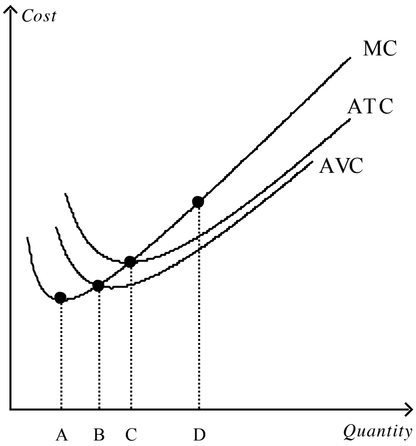
Introduction to Economics

Homework 2

Due on December 21, 2011

Refer to the figure below and answer questions 1 and 2.



1. The efficient scale of production occurs at which quantity?
2. At what level of output does the firm minimize its average variable cost of production?

Zach withdrew $400,000 out of his personal savings account and used it to start his new cookie business. The bank account pays 3 percent interest per year. During the first year of his business, Zach sold 6,000 boxes of cookies for $2.50 per box. Also during the first year, the cookie business made monetary outlays of $9,000. You may assume that there is no opportunity cost to Zach's time.

3. What was Zach's accounting profit for the year?
4. What was Zach's economic profit for the year?

Use the information in the table below and answer questions 5 and 6.

Number of Workers	Total Output	Marginal Product
0	0	--
1	200	
2	450	
3	600	
4	650	

5. Calculate the marginal product for each of the four workers.
6. At which number of workers does diminishing marginal product begin?

Eileen's Elegant Earrings produces pairs of earrings for its mail order catalogue business. Each pair is shipped in a separate box. She rents a small room for $150 a week in the downtown business district that serves as her factory. She can hire workers for $275 a week. There are no implicit costs.

Number of Workers	Boxes of Earrings Produced per Week	Marginal Product of Labor	Cost of Factory	Cost of Workers	Total Cost of Inputs
0	0				
1		330	$150	$275	$425
2	630				
3		150		$825	$975
4	890				
5	950	60		$1,375	
6		10			$1,800

7. What is the marginal product of the second worker?
8. What is the total cost associated with making 890 boxes of earrings per week?
9. During the week of July 4th, Eileen doesn't produce any earrings. What are her costs during the week?
10. One week, Eileen earns a profit of $125. If her revenue for the week is $1100, how many boxes of earrings did she produce?